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Los Alamos
National Laboratory

Environment, Safety, and Health Division

Air Quality Group
(ESH-17)

Quality Assurance Project Plan

for the

Operating Permit Project

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General Information

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Appendixes

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General Information, continued

History of revision

This table lists the revision history of this plan.

Revision	Date	Description of Changes
0	1/21/2000	New document.

Section 1

Quality Program

Organization

Introduction

This plan specifies how the Operating Permit Project ensures and demonstrates Los Alamos National Laboratory (LANL or the Laboratory) compliance with 20 NMAC 2.70 Operating Permits and all applicable requirements promulgated in the Federal Clean Air Act (CAAs) and States Air Quality Act (collectively referred to as CAAs).

Project mission

The Operating Permit Project ensures and demonstrates Laboratory compliance with 20 NMAC 2.70 by:

- Maintaining the Laboratory's Operating Permit quality assurance program
- Reviewing and interpreting potentially applicable regulations
- Developing and maintaining Laboratory strategy for CAA applicable requirement compliance programs
- Identifying new or modified sources which require permitting
- Permitting applicable sources
- Designing compliance programs
- Tracking permitted sources for compliance assurance
- Developing Laboratory Implementing Requirements (LIR) documents
- Maintaining institutional records
- Establishing recordkeeping requirements sufficient to meet applicable regulatory requirements
- Working with facility management and program personnel to identify and mitigate compliance concerns (e.g., needed permits)
- Generating compliance reports that meet the requirements of 20 NMAC 2.70 and all other CAA related reports.

Requirements

The primary driver for the development and implementation of the Operating Permit Project is 20 NMAC 2.70. Additional related requirements addressed in this project plan include all applicable regulations in Title 20 Environmental Protection, Chapter 2 Air Quality, of the New Mexico Administrative Code (20 NMAC 2) and those regulations found in 40 CFR 50 - 93 (Air Quality Programs) promulgated from the CAA.

Organization, continued

Project organization

The Air Quality Group (ESH-17) of the Environment, Safety, and Health (ESH) Division is responsible for the Operating Permit Project at Los Alamos National Laboratory.

Task teams have been established within the project team and in alignment with the major tasks of the project. The Project Leader establishes task teams and appoints task leaders. Task leaders may delegate their responsibilities to Operating Permit project personnel. See Appendix A for the current Operating Permit Project organization chart.

See the ESH-17 Group Quality Management Plan (ESH-17-QMP) for a description of the group organization and chain of authorities. References are presented in Appendix B.

Three specific required aspects of the Title V Operating Permit are organizationally separated within ESH-17 and are covered in separate quality plans. The three are:

- 40 CFR 61, Subpart M, Asbestos NESHAP (ESH-17-ASBESTOS)
- 40 CFR 61, Subpart H, Rad-NESHAP (ESH-17-RN)
- Refrigeration (plan in development)

However, the identification of new or modified operations as they relate to all three aspects are included in the New Source Review (NSR) function described in Section 5.3 of this document.

Organization, continued

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Manage the tasks and staffing of the project in order to deliver the project product(s). Define and document the project's planned goals and deliverables in this project plan. On an annual basis, prepare written project descriptions, clearly outlining technical scope, personnel, budget, and schedule – with the appropriate product and cost milestones. Track project budget, schedule, and progress. Recruit or request team members to work for the project. Plan, assign and manage tasks in order to ensure the following: • personnel are properly trained for the task • personnel follow prescribed work procedures, safety guidance (including LIR300-00-01, "Safe Work Practices"), and security requirements • tasks are completed on schedule, on budget, and meet quality specifications. Communicate with staff and provide guidance, peer review, and technical problem resolution. Evaluate the productivity and suitability of staff and recommend changes, as needed, to increase the productivity and skill level of staff.
Operating Permit Project personnel	Accomplish the assigned work in a manner that meets quality specifications, safe work practices, security guidelines, regulatory requirements, and specified timetables. Communicate with Project Leader on progress of work assignments. Account for the delivery of all work assignments. Bring technical problems with work assignments to the attention of the Project Leader.

Section 2

Personnel Development

Personnel Training and Qualification

Personnel requirements

Qualified Operating Permit Project team members will be hired and trained as prescribed in the ESH-17 QMP.

Personnel are required with knowledge in one or more of the following:

- Federal and State CAAs
- Air quality permitting
- Chemical engineering
- General engineering principles, including emissions estimates
- Data management principles, including databases, validation and verification, and legal defensibility
- Compliance assurance principles
- Laboratory operations
- Opacity monitoring (smoke school certified)

Training

As required by the ESH-17 QMP, all personnel performing project-related work are required to obtain appropriate training prior to performing work governed by a procedure. The Operating Permit Project Leader will determine training needs. Training to a procedure constitutes authorization to perform the work. Training for ESH-17 personnel will be performed and documented according to ESH-17-024 ("Personnel Training") and ESH-17-032 ("Orienting New Employees").

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Follow all requirements for personnel training as given in ESH-17-QMP.
Operating Permit Project personnel	Determine if training is required and ensure training is completed before starting work. Comply with training requirements in ESH-17-QMP.

Section 3

Quality Improvement

Improving Quality

Objectives, goals, and deliverable assessment

All objectives, goals, reports, and tasks performed in support of the project will be reviewed continuously by the Project Leader and project personnel to determine if they are candidates for automation and cost reduction, of value and necessity to the project, and can be replaced by something better. Results of these assessments will become the primary method used by the Project Leader to develop and improve the quality of project goals and deliverables.

Performance reports

Personnel assigned to perform Operating Permit Project activities provide periodic verbal or written updates to the Operating Permit Project Leader. These updates are used by the Project Leader to determine project focus.

The Project Leader provides periodic verbal or written updates to the Group Leader. These updates are used to keep group management apprised of the focus of Operating Permit Project activities, improvements, or shortcomings.

The Operating Permit Project Leader will prepare (or direct personnel to prepare) performance reports as needed. These performance reports will address items such as:

- Task advancements and accomplishments made toward Operating Permit Project goals and deliverables
- Audit/assessment activities relating to quality assurance of Operating Permit Project activities
- Problems or deficiencies identified during assessment activities or during routine performance of work.

Performance report distribution

The following personnel receive copies of project performance reports:

- ESH-17 Group Leader
- ESH-17 Quality Assurance Officer
- Operating Permit Project Leader
- ESH-17 project leaders
- ESH-17 personnel working on Operating Permit Project

Improving Quality, continued

Corrective actions within ESH-17

Corrective actions for all ESH-17 projects are initiated, tracked, corrected, and documented according to the ESH-17 Quality Management Plan and group procedure ESH-17-026, "Deficiency Tracking and Reporting."

Deficiency trending

At least once a year, the Operating Permit Project Leader reviews the deficiency reports to look for trends in the occurrence of deficiencies. Trending is intended to determine the existence of systematic design or implementation problems. The trending analysis results are documented in a memo or report, forwarded to the ESH-17 Group Leader, and copied to the ESH-17 records management system.

Quality improvement

Project activities will adhere to the policy for continuous improvement as given in the ESH-17 QMP.

Continuous quality improvement is incorporated into Operating Permit Project activities through a process of peer review and verification.

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Annually trend deficiencies and, as necessary, implement appropriate changes in the project to correct systematic problems. Provide periodic written or verbal reports to the Group Leader.
Operating Permit Project personnel	Document all violations of requirements in deficiency reports according to ESH-17-026.

Section 4

Documents and Records

4.1 Documents and Records

Policy

The Operating Permit Project will establish recordkeeping requirements and will assure the maintenance of these records at a level sufficient to demonstrate compliance with all CAA applicable requirements covered by this plan.

Critical data that are maintained in electronic form (e.g., databases and spreadsheets) will be maintained in a manner consistent with ESH-17 software quality assurance requirements and applicable procedures.

Records policy

Records will be maintained according to ESH-17 group policy as described in ESH-17-QMP. Appropriate and sufficient records will be maintained for a minimum of five years. The number, type, and detail of all records to be kept will be sufficient to meet the record keeping requirements of applicable regulatory requirements. Implementing procedures specify the records, forms, logbook entries, or other information to be kept as documentation of the performance of the procedures.

Document control

This plan is controlled through the ESH-17 document control procedure (ESH-17-030, "Document Distribution"). The following personnel receive controlled copies of this plan:

- ESH-17 Group Leader
- Operating Permit Project Leader
- Rad-NESHAP Project Leader
- Air Quality Monitoring Project Leader
- Title VI Project leader
- Information Management Team Leader
- ESH-17 personnel assigned to perform Operating Permit Project activities
- ESH-17 Quality Assurance Officer
- Assistant Area Manager, Office of Environment and Projects, DOE Los Alamos Area Office

Procedures

Procedures will be developed as necessary, as time and funding permit, and in accordance with the policy in the ESH-17 QMP and procedure ESH-17-022 ("Preparation, Review and Approval of Procedures").

4.1 Documents and Records, continued

Records series

Documentation of Operating Permit Project activities is maintained as records by the ESH-17 Records Coordinator. These records are maintained in several series according to type of record and are arranged by year and subject. These record series are described below.

Project records

Operating Permit Project records document project management, source determinations, and deliverables that are used to demonstrate compliance with reporting requirements for the CAAs. These records include permit applications, supporting documentation, emission reports, new source reviews, regulatory applicability determinations, and compliance records.

The following outline describes the general organization of the Operating Permit record series. These are working records and additional information will be added to the record series when new sources are installed at LANL, or when new regulatory requirements become applicable to LANL.

1) **Operating Permit Application Records**
   a) Source Information (individual files for each source or source type)
      i) Historical information used for initial Title V application
      ii) Current/Updated information
   b) Applicability Determinations
      i) Insignificant and Exempt sources
      ii) Facility-wide applicability determinations
   c) December 1995 Title V Permit Application
   d) Completeness Determination Letter from NMED
   e) Permit Application Updates

2) **Compliance Certification Records (by year)**
   a) Source Specific Compliance Records
   b) Facility-Wide Compliance Records
   c) Sub-contractor records and logs
   d) Signed Compliance Certification
   e) Correspondence with NMED

3) **20 NMAC 2.71 Operating Permit Fees**

4) **20 NMAC 2.72 -Construction Permits**
   Permit applications, supporting documentation, approved permits, and compliance records

4.1 Documents and Records, continued

a) TA 3-39 Beryllium Processing
b) TA 3-102 Beryllium Processing
c) TA 35-213 Beryllium Processing
d) TA 3-141 Beryllium Processing
e) TA 55-4 Beryllium Processing
f) Rock Crusher

5) 20 NMAC 2.60 - Open Burn Permits –
Permit applications, supporting documentation, approved permits, and compliance records.
a) TA-36 Operational Burn Permit (1995)
b) TA 33 and 39 Operational Burn Permit (1995)
c) 5-Year Operational Burn Permit (1997-2001)
d) Prescribed Burns

6) 20 NMAC 2.73 Notices of Intent
Source submittals for determination review by NMED

7) 20 NMAC 2.73 Annual Emission Inventory Report Records
a) Background information and supporting documentation
b) Emission Inventory Reports

8) New Source Review Records
ESH-ID review determinations, database tracking, State exemption notifications, record keeping, estimated process throughputs, calculations supporting emission estimates, stack monitoring/source sampling data, applicability determinations, and operating limits
a) Exempt Operation Notifications
b) Notifications Requiring Permit Revisions

9) Chemical Tracking Records
Maintain records that may include procurements, inventories, supporting calculations, and process information
a) 112(r) applicability determinations
b) Hazardous Air Pollutants
c) Volatile Organic Compounds
d) Ozone Depleting Substances

10) Regulatory Review Records
Regulation summaries, applicability determinations, emission calculations, supporting documentation for determining applicability
a) 20 NMAC 2
b) 40 CFR 50 – 99

4.1 Documents and Records, continued

Subcontractor records

Records from subcontractor organizations will be incorporated into the project files.

Disposition and retention

Active files will be maintained and kept by assigned Operating Permit Project personnel. After files have been finalized and all documentation is complete, these files will be submitted as records to the Records Coordinator. Records will be archived in compliance with Laboratory and DOE requirements for records retention, storage, and management and procedure ESH-17-025, "Records Management."

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Ensure all personnel in the project are aware of the records that must be preserved.
Operating Permit Project personnel	Ensure all records listed above are properly filed and preserved.

4.2 Electronic media

Policy

The Operating Permit project will utilize electronic means to maintain data and perform calculations on these data. Electronic means will not replace paper copy. All records that must be maintained to meet the applicable requirements will be kept in hard copy as the official record.

The preferred electronic means for data storage is a Microsoft Access database. However, until database implementation is complete, the use of spreadsheets will be acceptable provided that the function of such spreadsheets can be demonstrated through appropriate validation and verification methods.

Databases

Backups -- All databases used to hold data and generate reports to be used to demonstrate compliance will be maintained on the "Databases" drive of the Air Quality server. These databases will be backed up daily to minimize potential losses of data.

Verification of data -- All compliance-related data uploaded into a database will be verified to be accurate against the original paper copy. Data that are uploaded through electronic means will undergo peer verification. Data that are uploaded through manual means will undergo a 100% verification. The 100% review must be performed by someone other than the data entry person. This review will be documented and forwarded to the appropriate record series.

Verification of calculations -- All compliance-related calculations performed in a database through queries will be reviewed for accuracy by a person other than the person who generated the query. This review will be documented and forwarded to the appropriate record series.

Software control -- The integrity of all databases will be ensured by maintaining them on the Air Quality server. This will enable the ESH-17 database administrator to control access to these databases to only trained authorized persons. See the ESH-17 QMP for additional information on software quality assurance.

4.2 Electronic media, continued

Spreadsheets

Backups -- All spreadsheets used to hold data and generate reports to be used to demonstrate compliance will be maintained in a secure location. The preferred location is on the Air Quality server. Spreadsheets will be backed up at least weekly.

Verification of data -- All compliance-related data uploaded into a spreadsheet will be verified to be accurate against the original paper copy. Data that are uploaded through electronic means will undergo peer verification. Data that are uploaded through manual means will undergo a 100% verification. The 100% review must be performed by someone other than the data entry person. This review will be documented and forwarded to the appropriate record series.

Verification of calculations -- A person other than the person who generated the spreadsheet will review for accuracy all compliance-related calculations performed in a spreadsheet. This review will be documented and forwarded to the appropriate record series. Modifications to the function of these spreadsheets will also be verified in this manner.

Software control -- The integrity of spreadsheets will be ensured by limiting access to only trained, authorized personnel. See the ESH-17 QMP for additional information on software quality assurance.

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project personnel	Ensure that all spreadsheet and database calculations are verified and validated for accuracy in compliance with the requirements above. Ensure all data entered into a database or spreadsheet are verified as specified in the requirements above. Ensure all spreadsheets and databases are properly backed up in compliance with the requirements above.

Section 5

Work Processes

5.1 Planning and Performing Work

Purpose of Operating Permit work processes

The Operating Permit Project performs work to demonstrate compliance with the requirements of the Federal and State CAAs.

Requirements

Demonstrate compliance with Federal and State CAAs. A summary of current and relevant regulations is presented in Appendix C.

Policy

Work that contributes to achieving the quality specifications of Operating Permit Project deliverables will be planned, performed, and documented as stated in this plan and appropriate implementing procedures (see ESH-17-QMP, Section 5). The Operating Permit Project Leader will provide first-line supervision of personnel assigned to project tasks to ensure work is performed to achieve quality specifications. Work planning will be consistent with the principles of Integrated Safety Management (ISM) and in compliance with LIR 300-00-01, LIR 300-00-02, and work-planning requirements in ESH-17-QMP.

5.2 Regulatory Analysis

Purpose

The purpose of regulatory analysis is to maintain accurate and up-to-date knowledge of all existing, new, and proposed regulations in the Federal and State CAAs and determine their potential applicability to sources at LANL.

Requirements

Maintain knowledge of all existing, new, and proposed air quality regulations including 20 NMAC 2 and 40 CFR 50 – 99.

Policy

Periodic applicability determinations will be conducted for new regulations promulgated by Federal and State CAAs. Periodic review of new Laboratory operations will determine applicability status of the CAAs. All applicability determinations will be peer reviewed and documented. Analysis will be conducted to determine the need for the development of compliance initiatives and strategies (e.g., Laboratory Implementing Requirements (LIRs), record keeping, reporting, permitting, etc).

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Assign employees to review regulatory registers and regulations in order to determine LANL applicability. Assign employees to develop, distribute, peer review, and document the interpretations and applicability determinations. Assign employees to develop, distribute, peer review, and document potential to emit applicability determinations for Laboratory sources. Request legal review/concurrence as appropriate. Ensure timely notification of applicable requirements for LANL operations to facility personnel.

5.2 Regulatory Analysis, continued

Who	What
Regulatory Review Task Leader	Identify and review new and proposed regulations for applicability to LANL, and ensure final documentation is filed in the records room. Ensure records are maintained documenting all regulatory interpretations. Comment on proposed regulations that may impact the Laboratory. Collect source information to make regulatory applicability determinations. Document and peer review all applicability determinations. Initiate and propose possible compliance assurance program(s) to the Operating Permit Team. Develop and document the Laboratory's approach for determining potential to emit for industrial, R&D, and Rad-NESHAP sources using State and Federal guidance; existing Laboratory policies and operations; and changing regulatory interpretations as requirements change. Develop and document LANL's interpretation of definitions used when assessing regulatory applicability (e.g., "source," "potential to emit," "facility").

5.3 New Source Review

Purpose

The purpose of NSR is to review all new Laboratory activities and projects to ensure CAA requirements are met before the activity or project begins.

Requirement

Specific compliance requirements for individual projects may be source-specific (e.g., monitoring requirements, pre-construction approvals, etc.) or may encompass the entire Laboratory (e.g., Operating Permit Hazardous Air Pollutant thresholds, Prevention of Significant Deterioration, etc). In particular, the NSR process is used to :

- Determine whether new or changed projects at the Laboratory are *modifications* or *new construction* as defined in 20 NMAC 2.72 and 20 NMAC 2.70.
- Determine whether new or changed projects at the Laboratory that emit radionuclides are *modifications* or *new construction* as defined in 40 CFR 61 Subpart H.
- Determine any other air quality impact of new or changed projects at the Laboratory and identify any additional applicable CAA requirements.

Policy

The air quality group will conduct reviews of all new Laboratory activities and projects to ensure CAA requirements are met before the activity or project begins. The NSR personnel will identify all applicable CAA requirements, outline compliance initiatives, and work with field personnel to ensure that compliance initiatives are implemented.

The Operating Permit Project will evaluate all identified new, changed, or relocated projects to determine applicable requirements. Sound engineering principles (in the absence of specific regulatory direction) will be used to estimate potential and actual emissions. All applicability determinations and emissions calculations will be reviewed, documented, and maintained.

Implementation

The following table lists specific responsibilities.

5.3 New Source Review, continued

Who	What
Operating Permit Project Leader	Ensure that all applicable requirements for new and modified projects at the Laboratory are identified. Ensure that compliance programs are developed and implemented for all applicable requirements for every source and the facility. Ensure the development and maintenance of Laboratory Implementing Requirements (LIRs) that assist the Laboratory in identifying new projects that are of regulatory concern.
NSR Task Leader	Perform CAA applicability analysis of new, modified (operational changes), or relocated projects to determine regulatory requirements. Work in conjunction with the Permitting Task Leader to modify the Title V Operating Permit application and develop and implement compliance programs. Document NSRs. Prepare comments with brief summaries of the project and the applicable requirements. Obtain peer review of NSR assessment. Identify applicable technical reviewers and obtain technical reviews of NSR assessment. Inform relevant ESH-17 Project personnel of all NSRs involving materials or sources impacting the project. Notify operations and facility personnel of compliance requirements. Ensure that the Air Quality Review LIR is current regarding applicability advice and guidance. Develop a self-assessment process to assure Laboratory-wide implementation of the Air Quality Review LIR.

5.4 Permitting

Purpose

The purpose of the permitting work process is to assist the operating groups and the Laboratory in obtaining required permits under the CAA requirements.

Requirement

Air Quality permits must be obtained from the New Mexico Environment Department and/or EPA for sources of air pollution that have applicable permitting requirements. Several permit programs apply to the Laboratory that are included in this project plan. These permit programs include:

- 20 NMAC 2.70 - Operating Permits: This facility-wide permit includes all applicable CAA requirements.
- 20 NMAC 2.72 - Construction Permits: These permits are emission unit-specific permits that are required for new or modified equipment or operations if applicable criteria are met. This permit program includes permit requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAP) program, and the New Source Performance Standards (NSPS) program.
- 20 NMAC 2.74 - Prevention of Significant Deterioration (PSD): This permitting program is only applicable if LANL becomes a major source under the PSD definition.
- 20 NMAC 2.60 - Open Burning: Under this regulation, permits are required prior to conducting open burning.
- 40 CFR 61 Subpart H - Rad-NESHAP: Under this regulation, preconstruction applications are sent to EPA for new or modified projects that increase radiological emissions over a specified threshold.

Current air quality permits are presented in Appendix D. In addition to the beryllium machining activities that are permitted and listed in Appendix D, LANL operates some registered beryllium activities that are listed in Appendix E.

Policy

ESH-17 will help Laboratory operating entities apply for, negotiate, and comply with air quality permits required by State and Federal CAAs. The Air Quality group will provide Laboratory operations with solutions allowing maximum operational flexibility while minimizing air emissions, environmental impacts, and costs for maintaining compliance.

5.4 Permitting, continued

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Assign permit application drafting tasks to project personnel. Ensure timely completion of permits. Reviews all applications and permitting decisions. Ensure interaction and peer review with operating groups impacted by the permit. Resolve issues/concerns related to permit issues. Interact with the NMED or EPA on permit negotiations. Determine the need for permit revisions. Evaluate performance against permit conditions as described in section 5.5 Compliance Assurance Programs.
Permitting Task Leader	Prepare draft permit applications that adhere to regulatory requirements and conform to operating parameters and are reviewed by appropriate operations personnel. Ensure all calculations and permit applications are peer reviewed. Revise permits, as necessary. Maintain records including all background information for each permit application and ensure that complete files are submitted to the records room.

5.5 Compliance Assurance Programs

Purpose

The purpose of the compliance assurance programs is to design and implement programs that demonstrate continuous compliance for all applicable air quality regulations and permit conditions referenced in this plan.

Requirement

Compliance certifications are required for numerous state and federal regulations. Compliance certifications require that a certifying official attest to the source's compliance status with all permit terms and conditions and all applicable requirements relevant to the source. These include, but are not limited to:

- emission limitations
- equipment specifications
- work practices
- reporting and recordkeeping.

Policy

Compliance assurance programs will be developed and documented for all sources operating at LANL that have applicable air quality requirements. The minimum elements to be addressed in all compliance assurance programs are:

- Applicability determination
- Identification of applicable sources
- Identification of requirements and conditions to be met
- Description of compliance methodology
- Data verification and validation methodology
- Assessment program of applicable sources
- Records maintained to demonstrate compliance.

5.5 Compliance Assurance Programs, continued

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Ensure that all LANL applicable air quality requirements and/or sources have documented procedures. Ensure that personnel are assigned to design and implement procedures and to interact with operations personnel for each compliance program.
Compliance Program Development and Assurance Task Leader	Design and implement compliance assurance programs in coordination with operations and operating personnel. Document compliance assurance programs in procedures. Ensure that operating personnel follow established compliance assurance requirements. Ensure all data and documentation is collected, peer reviewed, and validated.

5.6 Reporting

Purpose

The purpose of reporting is to meet required regulations or permit conditions for periodic compliance reporting to State and Federal agencies for applicable sources referenced in this QAPP.

Requirement

An initial list of applicable reporting requirements from the Federal and State CAAs and LANL's air quality permits is presented in Appendix F. Reporting requirements may include the following:

- Initial notifications
- Anticipated and actual start-up notifications
- Notification for achieving maximum production
- Notification of compliance testing
- Compliance statements
- Emissions reports or inventories
- Exemption notifications.

Policy

The date of submission of the report to the appropriate agency will be reviewed as required by the Project Leader and properly documented and filed in the records room. The Project Leader will interact with all regulatory agencies to resolve any reporting conflicts and to negotiate any changes in reporting requirements.

5.6 Reporting, continued

Implementation

The following table lists specific responsibilities:

Who	What
Operating Permit Project Leader	Assign employees to track the various required reports, due dates, and associated requirements. Assign employees to prepare each required report and ensure final reports are properly filed. Review and approve final report before submittal. Obtain appropriate signatures before submittal.
Compliance Reporting Task Leader	Track the various required reports, due dates, and associated requirements. Complete reports accurately and timely. Ensure each report is peer reviewed by at least two other team members. Ensure each report and supporting documentation is completed, submitted, and properly filed in the records room.

5.7 Regulatory Interpretations and Compliance Strategies

Purpose

The purpose of documenting regulatory interpretations and compliance strategies is to provide consistent interpretation and implementation of CAA requirements.

Requirement

Document LANL's interpretation of regulatory language found in 20 NMAC 2 and 40 CFR 50 – 99.

Policy

Develop a conservative approach to:

- Ensure compliance.
- Conform with NMED and EPA policy and guidance.
- Ensure consistency in regulatory interpretation.

Asbestos

Asbestos D&D – A 10 working day notification to NMED is required prior to asbestos removal during demolition and major renovation activities. This demolition notification is required prior to performing any demolition activities, whether or not encountering asbestos is anticipated.

Asbestos Roofing Materials – The asphalt or coal tar residues should be sampled for asbestos after the roof is removed. If asbestos is detected, sandblasting should not be performed. NMED recommends a contained beadblasting operation equipped with an immediate vacuum to collect the beads and debris.

Asbestos Tanks – If tanks scheduled for demolition are coated on the outside, the coating should be sampled for asbestos. When tank demolition activities include the demolition of structural framework, notification to NMED is required, whether or not encountering asbestos is anticipated.

Asbestos Electrical Work – Electrical upgrades may involve equipment mounted on asbestos transite or high capacity wrapped in asbestos cloth. In addition, old substations may have or use asbestos transite pipe as conduits. Care must be taken during any excavation activities.

5.7 Regulatory Interpretations and Compliance Strategies, continued

Boiler – Applicability of 40 CFR 60 Subpart Dc

Per 40 CFR 60 - Standards of Performance for New Stationary Sources-Subpart A, a **stationary source** is defined as any building, structure, facility, or installation which emits or may emit any air pollutant. Therefore, LANL is the stationary source. **Affected facility** is defined in reference to a stationary source as any apparatus to which a standard is applicable. In 40 CFR 60 Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, there are two standards:

§60.42c Standard for sulfur dioxide applicable to coal and/or oil burning units; and

§60.43c Standard for particulate matter applicable to coal, oil, and/or wood burning units.

Therefore, 40 CFR 60 Subpart Dc does not apply to steam generating units burning only natural gas. If the unit has the ability to burn a back-up fuel such as diesel, then Subpart Dc may be applicable.

Boiler design ratings

Design rating of boilers is used to determine regulatory applicability under 20 NMAC 2.70 and 2.72 and to estimate potential to emit.

For LANL compliance, design rating for **atmospheric boilers** is based on an elevation adjustment (7500 ft above sea level) of the input rating as follows:

Design rating = Boiler plate input rating – 30%

The elevation adjustment is based on manufacturer-provided data of a 4% adjustment for every 1,000 ft above sea level.

The design rating for **forced draft boilers** is based on an elevation adjustment of the input rating as follows:

Design rating = Boiler plate input rating – 15%

This method of de-rating boilers for altitude corrections is consistent with the methodology presented in LANL Facility Engineering Manual Chapter 6 - Mechanical.

5.7 Regulatory Interpretations and Compliance Strategies, continued

Characterization and sampling

Characterization and sampling activities that are conducted in order to determine the extent of contamination do not require air quality permitting due to the low levels of contamination, the small sample sizes collected, and the minimal disturbance of contamination during characterization activities. However, remediation activities have a greater potential to result in air emissions and should be reviewed before they begin in order to evaluate the need for air quality permitting

Chemical tracking of HAPs and VOCs

Hazardous air pollutants (HAPs) and volatile organic compounds (VOCs) are regulated on a facility basis. Inventory systems and procurement records are used to track HAPs and VOCs used and emitted from LANL. It is recommended that procurement records go through the LANL inventory systems or are reported to ESH-17.

Construction

Building and construction activities, which are not considered stationary sources of regulated air pollutants under the air quality requirements, are exempt from permitting under 20 NMAC 2.70 and 2.72.

In addition, non-process fugitive emissions of toxic air pollutants from stationary sources are exempt from permitting requirements for TAPs (20 NMAC 2.72, S.402(c)(10)). This class of sources includes construction sites, unpaved rods, coal piles, tailings piles, waste piles, and fuel and ash handling operations.

Emissions inventory – 20 NMAC 2.73 annual report

Since LANL is a source under 20 NMAC 2.73, the following stationary "units" are reported annually to NMED in the emissions inventory:

- Units with a 20 NMAC 2.72 construction permit
- Units with actual air emissions in excess of 1 ton of lead or 10 tons of total suspended particulate, PM_{10}, SO_x, NO_x, CO, or VOCs in any calendar year including and subsequent to 1990
- Units not listed as Insignificant or Trivial Activities under the Operating Permit Program
- VOC emissions from R&D activities (based on chemical procurements)

5.7 Regulatory Interpretations and Compliance Strategies, continued

Enhanced rule

When using 40 CFR 61 Appendix D *Procedure* step (b) to estimate emissions of radioactive material, LANL will apply an enhanced version of the conservative "100 degree" rule. The enhanced rule is as follows: A radionuclide material that has a boiling point greater than 2000 degree C and is heated to within 1000 degree C of its boiling point or higher, or is intentionally dispersed into the environment, must be considered a gas. If the material is not heated to within 1000 degree C of its boiling point, the material would be considered a solid or a liquid depending on its actual physical state at that temperature. The original rule will be applied to all radionuclides with a boiling point less than or equal to 2000 degree C. See the Federal Facilities Compliance Agreement (dated May 1996) for documentation.

Exemptions under 20 NMAC 2.72

NESHAP and NSPS Exemptions – Per 20 NMAC 2.72, Section 202, exemptions C, sources and units subject to 40 CFR Part 60 (NSPS) and 40 CFR Part 61 (NESHAP), with the exceptions noted below, that meet the notification requirements to which they are subject under NSPS or NESHAP are not subject to the applicability statement in Section 200 A.3. In the event that there are no notification requirements to which they are subject under NSPS or NESHAP, the notification requirements are considered to be met.

Exemption C does not apply to the following sources:

- 40 CFR 60 Subpart I – Asphalt Plant
- 40 CFR 60 Subpart OOO – Rock Crushers
- 40 CFR 61 Subpart C – Beryllium
- 40 CFR 61 Subpart D – Beryllium Rocket Motor Firing

5.7 Regulatory Interpretations and Compliance Strategies, continued

Generators

To keep LANL below major source thresholds for PSD applicability, in the Title V Operating Permit application LANL requested voluntary limits on stationary generator use at an average of 168 hours/year/generator. Therefore generator hours of operation must be carefully tracked and documented. All LANL-owned stationary generators must be equipped with hour meters. Additionally, large portable generators (>150kw) are Title V sources and therefore hours of operation must be tracked for these generators as well.

Additional requirements associated with generators are:

- ESH-17 must be notified prior to purchasing any new stationary or large (>150 kw) portable fuel-fired generators.
- ESH-17 must be notified if LANL-owned stationary generators are relocated on site.
- ESH-17 must be notified before contractor-owned generators are brought on-site. An evaluation should first be made to determine if a generator from LANL's generator pool could be used.
- Portable generators can be moved within the site without additional notifications (see relocation issues in this section).

Landscaping and excavation

Landscaping and excavation activities may generate some particulate emissions. However, annual emissions generated from every day wind blown dust are generally higher than soil excavation emissions. Additionally, landscaping and excavating activities are considered maintenance and exempt from permitting under 20 NMAC 2.72.

Portable source

From 20 NMAC 2.70, Section 107, a portable source is defined as any equipment mounted on a chassis or skid that can be moved. Additionally the equipment shall not be attached or clamped to any anchor, slab or structure that must be removed prior to transporting the unit.

At LANL an additional criterion is used to determine if a piece of equipment qualifies as a portable source. The unit may not be situated in one location for more than 12 months and still be considered a portable source. This criterion is often used to determine which generators qualify as portable sources.

5.7 Regulatory Interpretations and Compliance Strategies, continued

Potential to emit

The requirement for an air quality permit is typically based on a source's "potential to emit" regulated air pollutants. This term is generally defined as:

> "The maximum capacity of a source to emit a pollutant under its physical and operational design."

Potential to emit is generally calculated assuming a source can operate at full capacity for 8760 hours per year. Any physical or operational limitation on the source can be treated as part of its design if the limit is federally enforceable. For example, air pollution control equipment, physical limitations on material throughput, or federally enforceable limits on hours of operations or material throughput can be factored in to the calculation of a source's potential to emit. When evaluating the need for an air quality permit, the source's potential to emit must be considered, regardless of planned actual usage of the equipment.

Each individual permitting regulation (e.g.. 20 NMAC 2.70, 20 NMAC 2.72, 20 NMAC 2.74) should be consulted for specific definitions and guidance on potential to emit. Additionally, EPA has published numerous guidance and White Papers on the issue of potential to emit for specific sources and facility types.

Potential to emit for R&D activities

Emissions from R&D activities are typically very small in total pounds emitted, and highly variable in the compounds or pollutants emitted due to frequent changes in the activities conducted. Because the issues of potential to emit (PTE) from R&D activities has never been agreed on or defined by NMED or EPA, LANL has always used maximum actual emissions to determine PTE. The use of maximum actual emissions is based on the fact that, unlike industrial sources, research activities are often short term without specified operating parameters. These maximum actual emissions exclude any air pollution control equipment and are based on the most reasonable worst case emissions for the specific research process. For the purpose of evaluating research activities this estimate is equivalent to the potential emission rate.

5.7 Regulatory Interpretations and Compliance Strategies, continued

Radionuclide new source review strategy

Since the FFCA was signed in October 1996, project reviews for radionuclide emissions have been conducted by evaluating potential new/modified sources on a building-by-building (or area-by-area) basis, rather than a project-by-project basis. This building-to-building approach has been based on the current radionuclide emissions inventory, process information, and estimated dose equivalents to the nearest facility receptor and the Rad-NESHAP highest offsite dose. Under this new source review approach, a new/modified project involving rad material is compared to the facility's existing inventory and monitoring configuration to determine the requirement for pre-construction notification and/or stack monitoring. If the project does not result in a change to the facility's current radionuclide inventory (i.e., no additional material and no change in the manner in which the material is processed/handled), then the project will not require pre-construction approval or any new/additional monitoring. This is based on the assumption that no change in inventory corresponds to no increase in emissions. A modification to a source (any physical or operational change) that does not result in an increase in emissions does not require pre-construction approval.

Reconstruction

Under 20 NMAC 2.72, Subpart IV – Toxic Air Pollutants,"Reconstruction" is defined as: a modification that results in the replacement of the components or addition of integrally related equipment to an existing source to such an extent that the fixed capital cost of the modification exceeds 50 percent of the fixed capital cost required to construct a comparable entirely new facility.

NMED has interpreted the term "source" to mean the entire LANL facility for 20 NMAC 2.72 Subpart II permitting applicability. Therefore the entire LANL facility is the existing source (constructed prior to December 31, 1988 as defined in the toxics portion of 2.72). Any changes, modifications, or reconstruction activities are evaluated to determine if they meet the reconstruction definition based on the capital costs of constructing an entire new Laboratory complex.

Under 40 CFR 60, Subpart A – New Source Performance Standards (NSPS) "Reconstruction" is defined as: the replacement of components of an existing facility to such as extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility.

5.7 Regulatory Interpretations and Compliance Strategies, continued

Reconstruction, continued

Under the NSPS, an affected facility is defined as "any apparatus to which a standard is applicable". Therefore when evaluating the applicability of various NSPSs to existing sources that are undergoing modifications or reconstructions, the capital cost of the individual piece of equipment must be considered.

Relocations – applicability of 20 NMAC 2.72 requirements

The act of repositioning or relocating sources of air emissions or emission points requires written notification to NMED per 20 NMAC 2.72 Section 202 (B)(4).

On June 16, 1999, LANL submitted a notification to NMED to cover the frequent relocation of all portable generators. Until NMED indicates otherwise, portable generator relocation notification requirements are satisfied.

Relocations – Under NESHAP Subpart A Provisions

Per 40 CFR 61 Subpart A (General Provisions - NESHAP), the relocation of an operation is not a modification.

Rad-NESHAP -- The relocation of an operation involving radioactive materials does not require pre-construction approval under 40 CFR 61 Subpart H (Rad-NESHAP). In addition, facilities that fall under Subpart H are exempt from the reporting and testing requirements of 40 CFR §61.10. The exemption is specified in 40 CFR §61.97. However, prior to the relocation, the estimated dose from the operation should be evaluated from the new location to determine the need for monitoring.

Beryllium-NESHAP -- Sources subject to 40 CFR 61 Subpart C (Beryllium-NESHAP) are not exempt from the reporting and testing requirements of 40 CFR §61.10. The relocation of beryllium machining operations must be reported to NMED under 40 CFR §61.10(c).

5.7 Regulatory Interpretations and Compliance Strategies, continued

Stationary Source Definition as applied to LANL for 20 NMAC 2.72 applicability

The NMED Air Quality Bureau views LANL as one large stationary source for emission threshold determinations. Therefore, for 20 NMAC 2.72 evaluation purposes, all pollutant emitting activities at LANL must be summed to determine the Laboratory's potential to emit.

On January 7, 1998, the 20 NMAC 2.72 regulation was revised to include permitting of new and modified emission units with the potential to emit 1000 lb/year of any air pollutants for sources already meeting or exceeding the 10/25 ton/yr threshold limit. LANL, as one large stationary source exceeds the 10/25 ton/yr definition of major source. Therefore, any modifications or new projects at LANL must be evaluated to determine the need for a 20 NMAC 2.72 permit based on an increase in emissions of 1000 lb/yr or more.

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Ensure that regulatory issues and key terms are identified, evaluated, and documented. Ensure that interpretation and strategy implementation is consistent and compliant with requirements.
Operating Permit Project personnel	Identify, evaluate, and document regulatory issues and key terms. Implement interpretation and strategy consistently.

Section 6

Design

Design

Policy The Operating Permit project requires no hardware design activity.

Section 7

Procurement

Procurement

Policy Procurement of items and services used in the Operating Permit project will follow the Laboratory procurement process and the requirements in the ESH-17-QMP. Most items and services required for the project are commercial grade in nature and no special procurement requirements or needs are necessary. For items and all services for which special requirements are necessary, the Project Leader and project personnel will identify such items or services.

Section 8

Inspection and Acceptance Testing

Inspection and Acceptance Testing

Policy Any materials or services will be inspected and/or tested prior to acceptance for use in the Operating Permit Project. Most supplies used during performance of project activities are commercial grade in nature and require no special acceptance practices or procedures.

Section 9

Management Assessment

Project Management Assessments

Internal assessments

The Air Quality Group will conduct internal management assessments of all projects and programs in the group in accordance with requirements in the ESH-17 Quality Management Plan and procedure ESH-17-029 ("Management Assessments"). This procedure requires periodic assessments by the group leader of the effectiveness of programs or projects. The Group Leader will perform an assessment of the effectiveness of the Operating Permit Project periodically. Assessments of the project will be documented and filed as records.

Responding to assessments

When violations of requirements are found during a management assessment, a deficiency report will be initiated to document the violation. Corrective actions will be tracked and documented in accordance with ESH-17-026 ("Deficiency Reporting and Correcting").

Implementation

The following table lists specific responsibilities.

Who	What
Operating Permit Project Leader	Participate in internal management assessments as planned by the group leader. Implement program changes as recommended by the group leader as a result of assessments.
Group Leader	Conduct periodic assessments of the project according to ESH-17-QMP.

Section 10

Independent Assessment

Project Assessments

Policy

The Project Leader will ensure that adequate assessments conducted by those outside ESH-17 are conducted. The ESH-17 Group Leader may request assessments of any program or project within ESH-17. These assessments may also include ESH-17 assessment of organizations that supply information to ESH-17 (e.g., ESH-5) or from which ESH-17 obtains services (e.g., analytical laboratories).

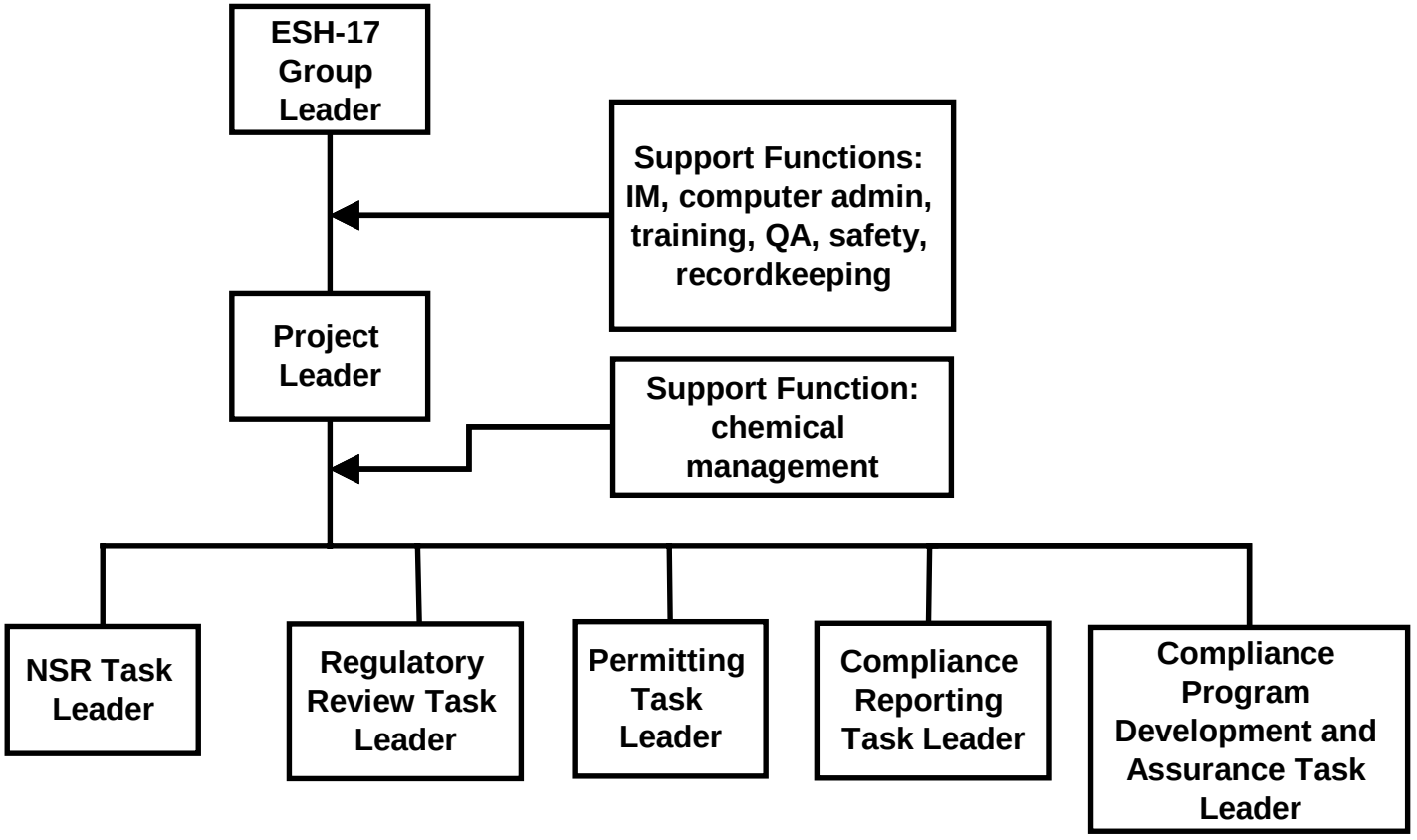
Implementation

The following table lists specific responsibilities.

Who	What
Project Leader	Request external assessments of the project as deemed necessary to provide assurance that the project meets applicable requirements.
Group Leader	Request assessments of the project as deemed necessary.

Appendix A

Operating Permit Project Organization Chart



Appendix B

References

Requirements and guidance documents:

Title 20 Chapter 2 of the New Mexico Administrative Code Sections 1-99 [http://www.nmenv.state.nm.us/NMED_regs/aqb_regs.html]

Title 40 Code of Federal Regulations Parts 50-99 [http://www.access.gpo.gov/nara/cfr/cfr-table-search.html]

LIR300-00-01.1, "Safe Work Practices", October 6, 1999

LIR300-00-02.1, "Documentation of Safe Work Practices," October 6,1999

LIR404-10-01.1, "Air Quality Reviews," October 2, 1998

FFCA, "Appendix A Compliance Plan" of the "Federal Facility Compliance Agreement," June 1996

LANL Facility Engineering Manual Chapter 6- Mechanical

Group ESH-17 Air Quality documents:

ESH-17-QMP, "Quality Management Plan for the Air Quality Group"

ESH-17-ASBESTOS, "Quality Assurance Project Plan for the Asbestos Report Project"

ESH-17-RN, "Quality Assurance Project Plan for the Rad-NESHAP Compliance Project"

ESH-17-022, "Preparation, Review, and Approval of Procedures"

ESH-17-024, "Personnel Training"

ESH-17-025, "Records Management"

ESH-17-026, "Deficiency Reporting and Correcting"

ESH-17-029, "Management Assessments"

ESH-17-030, "Document Distribution"

ESH-17-032, "Orienting New Employees"

Appendix C

Current Regulations

Summary of Applicable and Potentially Applicable Air Quality Regulations

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
20 NMAC 2.3 Ambient Air Quality Standards	Pollutants with NM and Federal Ambient Air Quality Standards	All	Emissions from LANL sources may not cause or contribute to exceedances of any federal or state ambient air quality standards.
20 NMAC 2.7 Excess Emissions during Malfunction, Startup, Shutdown, or Scheduled Maintenance	All	All	Notification procedures for conditions creating excess emissions.
20 NMAC 2.11 Asphalt Process Equipment	Particulate Matter (PM)	Asphalt Plant	The asphalt plant at TA-3-73 is limited to a PM emission rate of 34 pounds/hour.
20 NMAC 2.33 Gas Burning Equipment –NO_2	NO_2	Gas Burning Equipment - Heat Input>1,000,000 MMBTU/year/unit	LANL's TA-3-22 steam plant's units have the capacity to operate at >1,000,000 MMBTU/yr/unit. However, voluntary federally enforceable limits on the operation of the units at <1,000,000 MMBTU/yr/unit are included in LANL's Operating permit application dated December 1995.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
20 NMAC 2.34 Oil Burning Equipment - NO_2	NO_2	Oil Burning Equipment - Heat Input >1,000,000 MMBTU/year/unit	LANL's TA-3-22 steam plant's units have the capacity to operate at >1,000,000 MMBTU/yr/unit. However, voluntary federally enforceable limits on the operation of the units at <1,000,000 MMBTU/yr/unit are included in LANL's Operating permit application submitted to NMED in December 1995.
20 NMAC 2.60 Open Burning	None	Open Burning	Open burn permits are required for covered burning activities, such as prescribed burns, and disposal of dangerous materials.
20 NMAC 2.61 Control of Smoke and Visible Emissions	Smoke and Visible Emissions	Combustion Equipment	Limits opacity for all stationary combustion sources and diesel-powered vehicles.
20 NMAC 2.70 Operating Permits	All	All Stationary Sources, except Those Considered "Insignificant Activities," "Trivial Activities," or Otherwise Exempted	LANL is a major source of NO_x and therefore required to obtain a 20 NMAC 2.70 operating permit. LANL submitted its operating permit application to NMED in December 1995.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
20 NMAC 2.71 Operating Permit Emission Fees	All	All Stationary Sources, except Those Considered "Insignificant Activities," "Trivial Activities", or Otherwise Exempted	LANL must submit annual operating permit fees based on the emission levels described in the 20 NMAC 2.70 Operating permit application submitted to NMED in December 1995, or the resulting Operating permit, when it is issued.
20 NMAC 2.72 Construction Permits	All	New and Modified Sources	LANL must obtain construction permits for any new or modified sources as defined in 20 NMAC 2.72.
20 NMAC 2.73 Notice of Intent and Emissions Inventory Requirements	All	Notice of Intent (NOI) for New and Modified Sources Emissions Inventory Requirements	LANL must submit an NOI for any new or modified source with a potential emission rate greater than 10 tons per year of any regulated air contaminant or 1 ton per year of lead. LANL must file an annual emissions inventory for all non-exempt sources.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
20 NMAC 2.74 Permits - Prevention of Significant Deterioration (PSD)	All	New or Modified Sources Emitting More than the Significance Level	LANL is not currently a PSD source because it has not constructed or modified a source with emissions greater than any PSD significance levels since PSD became applicable to federal facilities in 1986. LANL has applied for voluntary, federally enforceable emission and operational limitations (via 20 NMAC 2.70) to limit the Laboratory's potential to emit below 250 tons per year for all PSD pollutants.
20 NMAC 2.77 New Source Performance Standards (NSPS) (40 CFR 60 Subpart A – General Provisions)	All	General New Source Performance Standard Requirements	Subpart A is applicable to sources that are subject to specific New Source Performance Standards (NSPS).
20 NMAC 2.77 NSPS (40 CFR 60 Subpart Db - NSPS for Industrial-Commercial-Institutional Steam Generating Units)	PM SO_2 NO_x	Steam Generating Units >100 MMBTU/hr Constructed/Modified after June 9, 1989	N/A -The only boiler units with capacities greater than 100 MMBTU/hr are located at the TA-3 steam plant. These boilers are rated at 210 MMBTU/hr but were constructed in 1950-1952. However, any changes, modifications, or reconstruction to these units could trigger Subpart Db.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
20 NMAC 2.77 NSPS (40 CFR 60 Subpart Dc - NSPS for Small Industrial-Commercial-Institutional Steam Generating Units)	PM SO_2	Steam Generating Units <100 MMBTU/hr and >10 MMBTU/hr Constructed or Modified after June 9, 1989	N/A - Applies only to boilers between 10 - 100 MMBTU combusting coal, coal refuse, oil, or wood. LANL currently does not have any boilers constructed after June 9, 1989 that combust these fuels. However, any changes, modification, or reconstruction to existing boilers could trigger Subpart Dc. Additionally, any new boilers installed at LANL must be evaluated for applicability of Subpart Dc.
20 NMAC 2.77 NSPS (40 CFR 60 Subpart I - NSPS for Hot Mix Asphalt Facilities)	PM	Hot Mix Asphalt Facilities Constructed/Modified after June 11, 1973	N/A - LANL's asphalt plant was constructed in 1960 and the pollution control equipment was installed in 1962. However, any changes, modification, or reconstruction of the asphalt plant could trigger Subpart I.
20 NMAC 2.77 NSPS (40 CFR 60 Subpart K - NSPS for Storage Vessels for Petroleum Liquids)	Volatile Organic Compounds (VOCs)	Storage vessels (>40,000 gal) for petroleum liquids Constructed/Modified after June 11, 1973 and prior to May 19, 1978	N/A – LANL tanks of this size are either totally exempt because they were built before the effective date of this regulation or store exempt materials, or are exempt because they store low volatility petroleum liquids.
20 NMAC 2.77 NSPS (40 CFR 60 Subpart Kb - NSPS for Volatile Organic Liquid Storage Vessels)	VOCs	Storage vessels for volatile organic liquids (>40 cubic meters) Constructed/Modified after July 23, 1984	The only affected tanks at LANL are exempt from the requirements because they store low volatility organic liquids. The Laboratory must keep records of the tank dimensions and capacities. Any new tanks should be evaluated for applicability of Subpart Kb.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
20 NMAC 2.77 NSPS (40 CFR 60 Subpart UU - NSPS for Asphalt Processing and Asphalt Roofing Manufacture)	PM	Asphalt Processing and Asphalt Roofing Manufacturing Constructed/Modified after November 18, 1980	N/A – LANL's asphalt plant was constructed in 1960 and the pollution control equipment was installed in 1962. However any changes, modification or reconstruction to the asphalt plant could trigger Subpart UU requirements.
20 NMAC 2.78 Emission Standards for Hazardous Air Pollutants (40 CFR 61, Subpart A - NESHAP - General Provisions)	All NESHAP-regulated pollutants	Various	LANL has NESHAP permits for its beryllium machining operations (40 CFR 61, Subpart C). The provisions of Subpart A are incorporated into the 20 NMAC 2.72 permits. Construction approvals have been obtained for various radionuclide sources under 40 CFR 61, Subpart H as well.
20 NMAC 2.78 NESHAP (40 CFR 61, Subpart C - NESHAP for Beryllium)	Beryllium	Beryllium Machining and Processing	LANL currently has beryllium permits for beryllium machining and processing which include operating requirements, process throughput limits, and emission limits.
20 NMAC 2.78 NESHAP (40 CFR 61, Subpart M NESHAP for Asbestos)	Asbestos	Demolition and renovation Asbestos disposal	LANL participates in demolition and renovation activities involving asbestos. Work practices must be followed. Recordkeeping and notification requirements must be followed. Radioactively contaminated asbestos materials disposed on-site are regulated under 40 CFR 61.154.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
40 CFR 61, Subpart H NESHAP for Radionuclides other than Radon from DOE Facilities	Radionuclides	Department of Energy Facilities	Emissions of radionuclides from DOE facilities may not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/year.
40 CFR 61, Subpart Q NESHAP for Radon Emissions from DOE Facilities	Radon-222	DOE Facilities Storing By-product Materials	Applicable to TA-54 Low Level Waste Disposal Facility. Facility can not emit more than 20 PicoCuries per square meter per second (20 $pCi/m^2/sec$) of radon-222.
20 NMAC 2.82 Maximum Achievable Control Technology Standards for Source Categories of Hazardous Air Pollutants (40 CFR 63, Subpart T MACT for Halogenated Solvent Cleaning)	6 listed ozone depleting substances if present in amounts greater than 5%	Degreasers greater than 2 gallons in size	LANL has one degreaser currently using a regulated chemical. Work practices must be followed, as well as recordkeeping and reporting requirements.
20 NMAC 2.82 MACT (40 CFR 63, Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities)	112(b) HAPs	Manufacture or rework of aerospace vehicles or components	N/A – Research and development are exempt from the requirements of this regulation. However, if LANL conducts any aerospace component production, manufacturing, or rework, Subpart GG could be triggered.

Regulation	Regulated Pollutants	Regulated Source Category	Applicability
40 CFR 68, Subpart Chemical Accident Prevention Provisions	112(r) HAPs	All	LANL does not store quantities of 112(r) toxic or flammable materials in quantities above the thresholds for triggering applicability of this regulation. However, inventory of regulated materials must be continually managed and evaluated for future applicability of this regulation.
40 CFR 82, Subpart B Servicing of Motor Vehicle Air Conditioners	CFCs and HCFCs	Repair and Service of Motor Vehicle Air Conditioners	Certified equipment and trained technicians must be used for any repair or servicing of motor vehicle air conditioners.
40 CFR 82 Subpart F Recycling and Emission Reduction	CFCs and HCFCs	Stationary Refrigeration Appliances	Applicable to appliances containing Class I or Class II ozone depleting substances (ODSs).

HAP = hazardous air pollutant
NESHAP = National Emission Standards for Hazardous Air Pollutants
NSPS = New Source Performance Standards

Appendix D

Permits

Source	Permit	Date issued	Expiration date
Rock Crusher	Construction Permit #2195	June 16, 1999	None
Be Machining at TA-3-39	Construction Permit # 635	March 19, 1986	None
Be Machining at TA-3-102	Construction Permit # 636	March 19, 1986	None
Be Machining at TA-3-141	Construction Permit # 634-M2	October 30, 1998	None
Be Machining at TA-35-213	Construction Permit # 632	December 26, 1985	None
Be Machining at TA-55-4	Construction Permit # 1081-M1-R2	July 1, 1994 Revised March 11, 1998	None
Operational Burning	Open Burning	August 18, 1997	December 31, 2002
Prescribed Burning	Open Burning	February 26, 1999	December 31, 1999

Appendix E

Registered Be Sources

Site	Operations
TA-3-29	cutting, snipping, melting, alloying
TA-3-SM-66	electroplating/chemical milling final polishing of metallographic specimen
TA-3-1819	alloying, arc melting, cutting
TA-16-410	wet sanding, spot welding
TA-35-87	cutting and snipping of foil

Appendix F

Reporting

The reporting requirements fulfilled by the Operating Permit project include but are not limited to those described in the following table. Additional reporting requirements fulfilled by other projects may exist and will be documented in the applicable quality plans and procedures for the respective projects.

Applicable Regulation	Driver	Type of Report	Frequency
20 NMAC 2.60 Open Burning	Permit condition under open burn permit for operational burning	Fire Activity Report to NMED	Annual
	Permit condition under open burn permit for prescribed burning	To be determined	To be determined
20 NMAC 2.70 Operating Permits	Permit condition under Operating permit	To be determined	To be determined
20 NMAC 2.72 Construction Permits	20 NMAC 2.72 Section 202 Exemptions B	Exemption notification to NMED	As needed
	Permit conditions for beryllium machining activities	Notification for anticipated date of start-up to NMED	Initial start-up
		Notification for actual date of start-up to NMED	Initial start-up
		Notification for reaching maximum production to NMED	Initial start-up
		Notification for compliance status to NMED	Specific to permit
		Notification for compliance test to NMED	Specific to permit
		Compliance test protocol to NMED	Specific to permit
		Copy of compliance test to NMED	Specific to permit
	Permit conditions for rock crusher	Relocation notices to NMED	As needed
		Notification for anticipated date of start-up to NMED	Initial start-up

Applicable Regulation	Driver	Type of Report	Frequency
		Notification for actual date of start-up to NMED	Initial start-up
		Notification for equipment substitution to NMED	As needed
		Notification for compliance tests to NMED	Prior to test
		Compliance test protocol to NMED	Prior to test
		Copy of compliance test to NMED	After test
20 NMAC 2.73 Notice of Intent, Emissions Inventory Requirements	20 NMAC 2.73 Subpart II	Notice of intent to NMED	As needed
	20 NMAC 2.73 Subpart III	Emissions inventory to NMED	Annual
40 CFR 63 Subpart T Halogenated Solvent Cleaning	40 CFR §63.468	Initial notification to NMED	Initial start-up
		Compliance report to NMED	As required
		Annual report	As required for batch vapor and in-line solvent cleaning machines
		Exceedance reports	As required for batch vapor and in-line solvent cleaning machines
40 CFR 61 Subpart H	40 CFR §61.94(b)(8)	Exemption reporting to EPA with Rad-NESHAP team	Annual